Service
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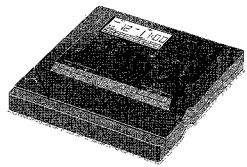

Service Manual

COMPACT disc DIGITAL AUDIO

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(S) Varning !
Osynlig laserstrålning når denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.

(DK) Advarsel !
Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

(SF) Varoitus !
Laite sisältää laserdiodin, joka lähettää näkymätöntä silmille vaarallista lasersäteilyä.

CLASS 1 LASER PRODUCT

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, ayant habitués à réparer votre appareil en panne".

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PHILIPS

PHILIPS

SPECIFICATION

GENERAL:

Accu-package	
Type	: SBC 64-08
Output voltage	: 4 V nom.
Lifetime	: 1,75 hours

CD-PART:

Frequency response	: 20 - 20.000 Hz within 1dB
Output level	: 1,2 Vrms within 2dB
S/N ratio	: 80 dB min.
THD	: 0,2 % max. at 1 kHz
Channel difference	: 2 dB max.
Channel crosstalk	: -50 dB max. at 1 kHz
Deemphasis	: 0 or 15/50 µs switched autom. by subcode on the disc
DAC	: 1 bit "BITSTREAM"

(GB) WARNING

All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools at this potential.

(F) ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).
Leur longévite pourrait être considérablement écourtée par le fait qu'aucune précaution nést prise à leur manipulation.
Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiiser le bracelet serti d'une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

(D) WARNUNG

Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.
Sorgen Sie dafür, daß sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

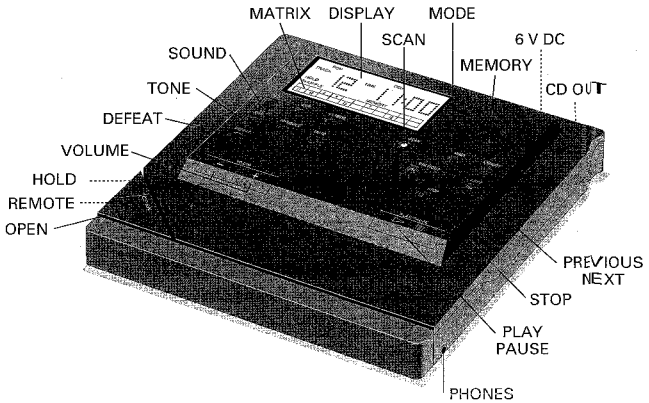
(NL) WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen vermindern.
Zorg ervoor dát u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(I) AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione.
Durante le riparationi occorre quindi essere collegato allo stesso potenziale che quello della massa deléapparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

SHUT OFF FUNCTIONS, CONNECTIONS



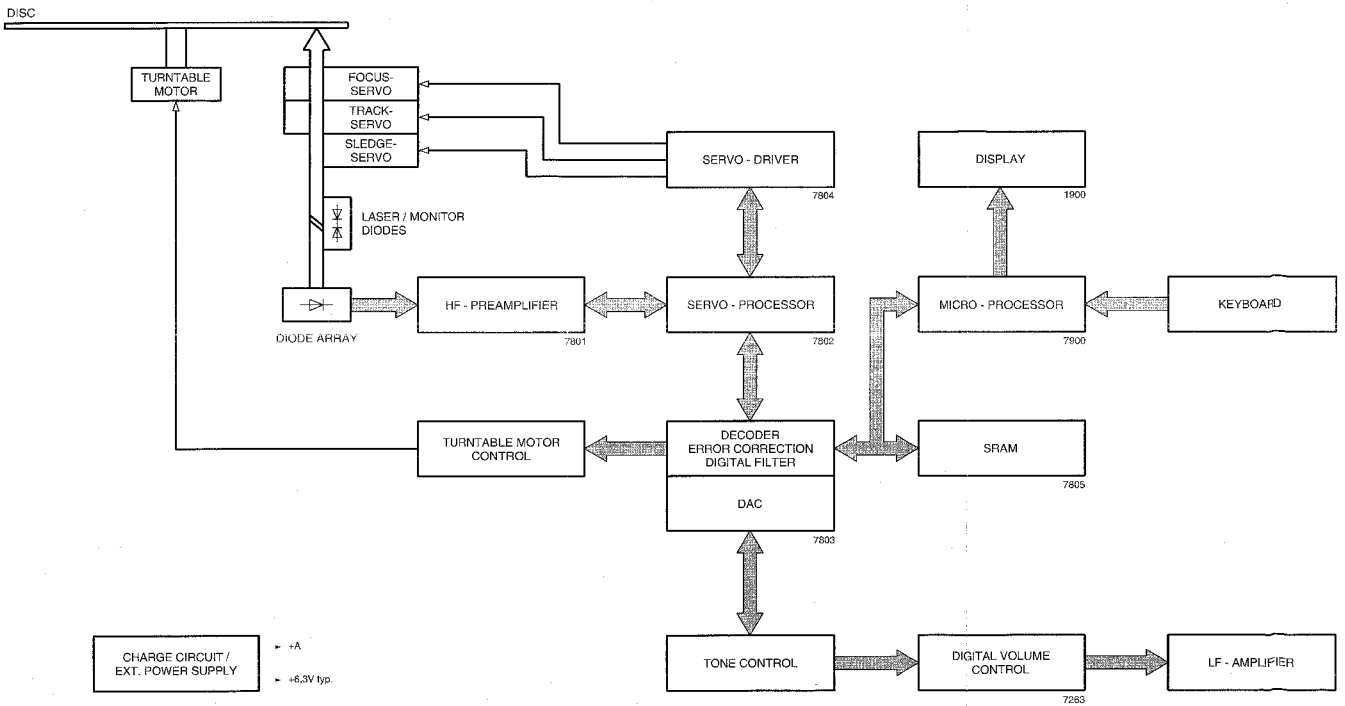
OPERATION	CONDITION	ACTION
CLOSE DOOR	POWER OFF	Power on - Start up - Read TOC - STOP - Update display-information (matrix, max. tracks on disc, length of CD)
OPEN DOOR	POWER ON/OFF	Power off - Clear display - Clear TOC - Clear program memory - Clear modes
Switch HOLD ON	POWER ON	All keys are ignored, flag hold is shown on the display. The set works normally with the wired- or the IR-remote control.
SHUT OFF	STOP	The set shuts off after approx. 30s after the last physical action. All parameters (program, volume, soundfeatures) are memorized.
BATTERY WEAK	POWER ON	Battery empty indication is flashing.
	POWER OFF	The set doesn't start up if PLAY is pressed. Flag battery empty is shown for 500ms.
BATTERY EMPTY	POWER ON	The set is switched off

CONNECTION	
6 V DC	Socket for the mains adaptor / battery charger SBC 6608
PHONES	Headphone output
CD-OUT	Linear output for hifi-systems
REMOTE	Socket for the optional IR-remote control set SBC 6209 or the wired remote control SBC 6203

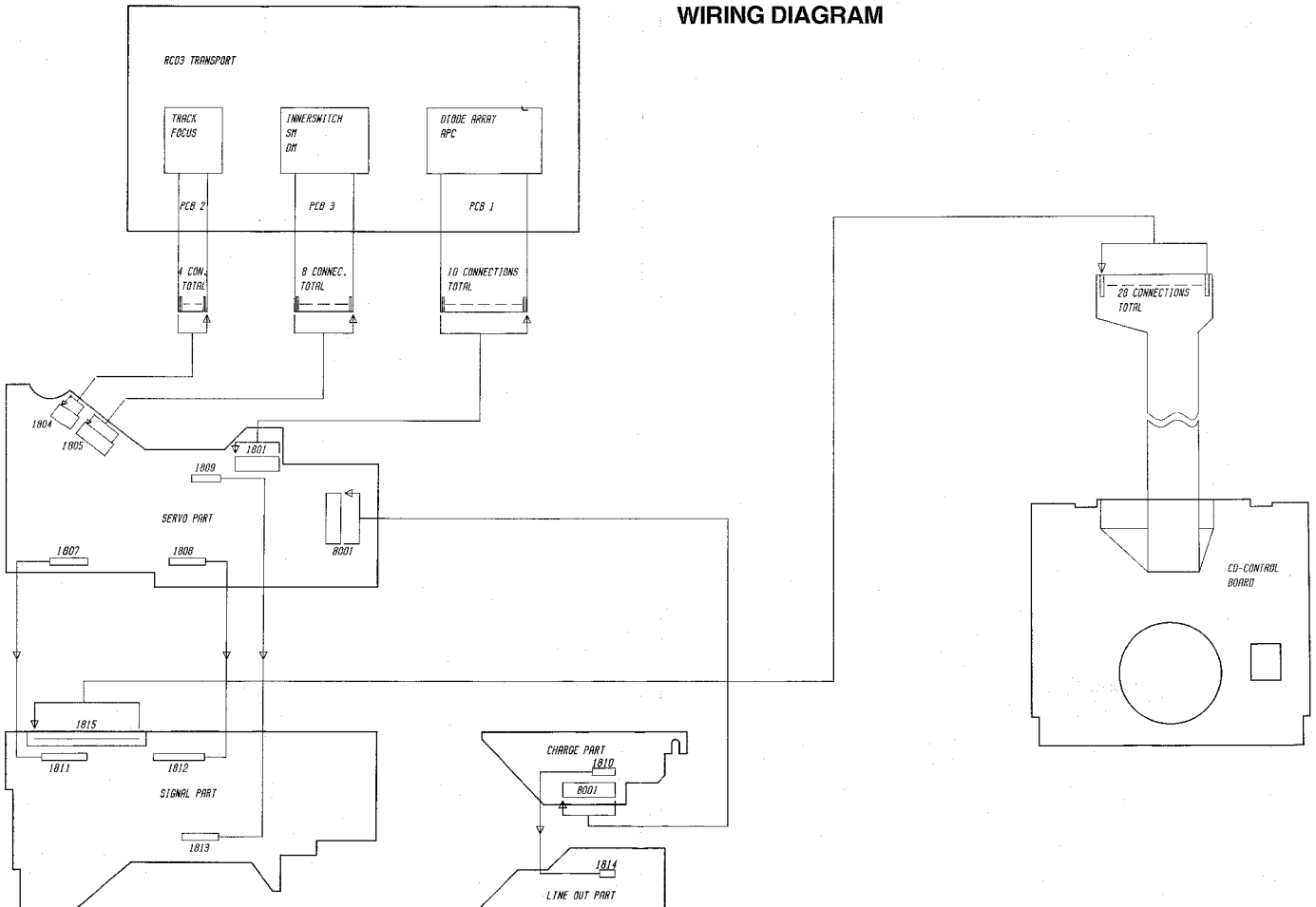
CONTROLS

KEY	CONDITION	ACTION
PLAY	POWER ON/OFF	Starts playing the 1st track, preselected track or 1st programmed track. The available tracks are shown on the matrix, the actual track is flashing.
	PLAY	Toggles between PLAY and PAUSE.
	STOP/TRACK STORED	The programmed tracknumbers are shown on the matrix. After starting up by pressing PLAY the actual tracknumber is flashing. An already played tracknumber will be cleared from the display.
	SCAN	Leaves the SCAN-mode and continues normal play.
	STOP/SHUFFLE	All existing (or programmed) tracknumbers are shown on the matrix. The set starts playing the first random track. An already played tracknumber will be cleared from the matrix.
STOP	PLAY	The set goes into STOP-mode, the display shows the TOC-informations.
	STOP	Cleares the program-memory. "C" is shown on the display for 500ms.
NEXT	STOP	Tracknumber for playback can be selected. The selected track is flashing, all lower tracknumbers than the selected one are cleared from the matrix.
	PLAY	Skips forward to the next track.
	PLAY/MEMORY	Skips forward to the next stored track.
	PLAY/SHUFFLE	Skips forward to the next random-track. After reaching the last random-title a new sequence will be generated, the "shuffle-snake" is shown on the track-indication and all tracknumbers are flashing.
	PROGRAMMING	Skips forward to the next program-track.
	KEY DEPRESSED FOR MORE THAN 1s.	Fast forward till the key is released, high speed after 6s (except SCAN-mode).
PREV	STOP	Similar as NEXT, but opposite direction.
	PLAY	Skips backward to the previous track.
	PLAY/MEMORY	Skips backward to the previous stored track.
	PLAY/SHUFFLE	Skips backward to the previous random-track. After reaching the first shuffled title a new shuffle sequence will be started.
	PROGRAMMING	Skips forward to the previous program-track.
	KEY DEPRESSED FOR MORE THAN 1s.	Fast backward till the key is released, high speed after 6s (except SCAN-mode).
SCAN	PLAY/STOP	Scan starts from the first or selected track. The first 10s of the available track-numbers will be audible.
PROGRAM	PLAY/STOP	PROGRAM-mode is activated. Tracks can be selected using NEXT/PREV. Pressing PROGRAM again will store the selected tracknumber - "P" is shown on the display. A maximum of 32 tracks can be stored. If the memory has been filled up "FULL" is shown on the display. To leave the PROGRAM-mode release the keys for approx. 3s.
	REVIEW	REVIEW is activated if the PROGRAM button is depressed for more than 1s. The programmed titles will be shown on the matrix.
MODE	PLAY/STOP	Scrolls the functions REPEAT 1 - REPEAT ALL - SHUFFLE - SHUFFLE REPEAT. The selected operation takes place when the current title has been changed.
VOL +	PLAY/STOP	Volume up (16 steps).
VOL -	PLAY/STOP	Volume down (16 steps).
JAZZ, POP, CLASSIC	PLAY/STOP	Soundfeatures
AMB, DBB, MUTE	PLAY/STOP	This soundfeatures can be added individually.
DEF	PLAY/STOP	Clears all soundfeatures.

BLOCKDIAGRAM



WIRING DIAGRAM



SERVICE TEST PROGRAM

1. PRELIMINARY SETUP
To get into the service test program hold the keys PLAY & STOP depressed while turning POWER ON. The display is as shown in fig. 1. IMPORTANT NOTES: The door switch is ignored by software and the door can be opened during the test procedure. This might be helpful when checking the movement of the lens. ATTENTION: The laser beam is also kept emitting - Please take care of safety requirements !

2. SERVICE STEP 1 - SLIDE MOVEMENT
To get into the service step 1 fulfil preliminary setup. The position of slide-motor can be defined by holding NEXT resp. PREV depressed. At the inner and outer endpoints ratcheting will be audible. Stop pressing the keys at this points.
To get into service step 2 press the PLAY button.

3. SERVICE STEP 2 - LENS MOVEMENT & FOCUS SEARCH
Display is as shown in fig. 2. To check movement of the lens open door and remove the disc. The lens should move up/down continuously, the focus control circuit is activated. Signal 11can be measured on pin 29 of the servo processor 7802. To check the focus search procedure insert disc and. If a focus has been found the display is as shown in fig. 3.
To get into service step 3 press the PLAY button, to return to service step 1 press STOP.

4. SERVICE STEP 3 - TURNTABLE MOTOR
Display is as shown in fig. 4. The turntable motor will start rotating, the focus control circuit is activated.
To get into service step 4 press the PLAY button, to return to service step 1 press STOP.

FACTORY TEST PROGRAM

1. PRELIMINARY SETUP
To get into the factory test program hold the keys JAZZ & POP & CLASSIC depressed while turning POWER ON. The display is as shown in fig. 9. IMPORTANT NOTES: The door switch is ignored by software and the door can be opened during the test procedure. ATTENTION: The laser beam is also kept emitting - Please take care of safety requirements !

2. FACTORY STEP 1/2 - PORTTEST 1/2
To get into service step 1 fulfil preliminary setup. Porttest 1 is started immediately. Display is as shown in fig. 9. To get into porttest 2 press the NEXT button. Display is as shown in fig. 10. NOTE: These procedures require special test adaptors and are used during the production process only. Please ignore porttests and go on with factory step 3 - keytest.

3. FACTORY STEP 3 - KEYTEST
To get into service step 3 fulfil preliminary setup and press the NEXT button twice. The keynumber of NEXT (14) is shown on the display immediately. Please press the following buttons and check their corresponding keynumbers:

JAZZ, MEM.	01	AMBIENCE	06	DEFEAT	11
CLASSIC	02	DBB	07	MODE	12
POP	03	PREV	08	STOP	13
SCAN	04	VOL+	09	(NEXT	14)
MUTE	05	VOL-	10	PLAY	15

To get into factory step 4 press the NEXT button.

5. SERVICE STEP 4 - TRACKING
Display is as shown in fig. 5. Focus-, track- and slide control circuits are activated, music is audible. This mode is equal to the normal play mode without soundfeatures and special functions (scan, shuffle, ...). To jump 12 tracks forward/backward press the keys NEXT resp. PREV.
To get into service step 5 press the PLAY button, to return to service step 1 press STOP.

6. SERVICE STEP 5 - DISPLAY TEST 1
Display is as shown in fig. 6 - All vertical segments, all sound-feature flaggs and the hold flagg are activated.
To get into service step 6 press the PLAY button, to return to service step 1 press STOP.

7. SERVICE STEP 6 - DISPLAY TEST 2
Display is as shown in fig. 7 - All horizontal segments and all mode flaggs are activated.
To get into service step 6 press the PLAY button, to return to service step 1 press STOP.

8. SERVICE STEP 7 - DISPLAY TEST 3
Display is as shown in fig. 8 - All existing segments are activ.
To leave the service test program disconnect the set from the power supply, to return to service step 1 press STOP.

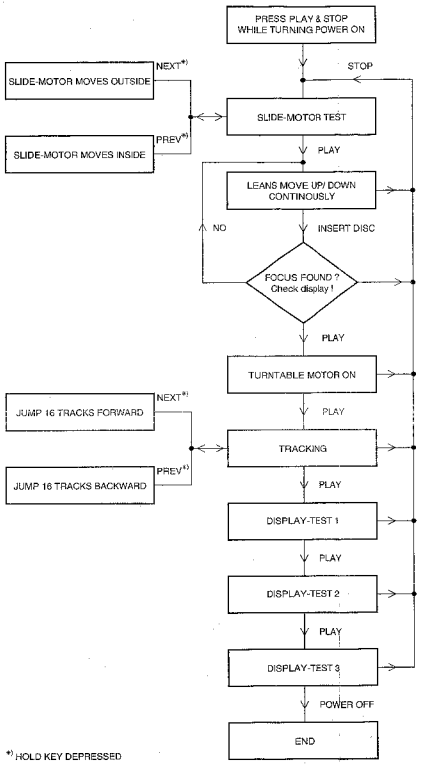
4. FACTORY STEP 4 - OSCILLATOR TEST
This test checks the quartz-oscillators 5900 (32,76 kHz) and 5901 (6 MHz). When no fault has been found the display is as shown in fig. 11 else the display shows fig. 12.
To get into factory step 5 press the NEXT button.

5. FACTORY STEP 5 - DISPLAY TEST 1
Display is as shown in fig. 6. All vertical segments, all sound-feature flaggs and the hold flagg are activated.
To get into factory step 6 press the NEXT button.

6. FACTORY STEP 6 - DISPLAY TEST 2
Display is as shown in fig. 7 - All horizontal segments and all mode flaggs are activated.
To get into factory step 7 press the NEXT button.

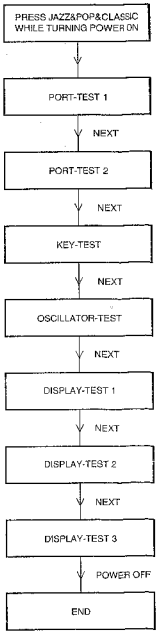
7. FACTORY STEP 7 - DISPLAY TEST 3
Display is as shown in fig. 8 - All existing segments are activ.
To leave the factory test program disconnect the set from the power supply.

SERVICE TEST PROGRAM



*) HOLD KEY DEPRESSED

FACTORY TEST PROGRAM



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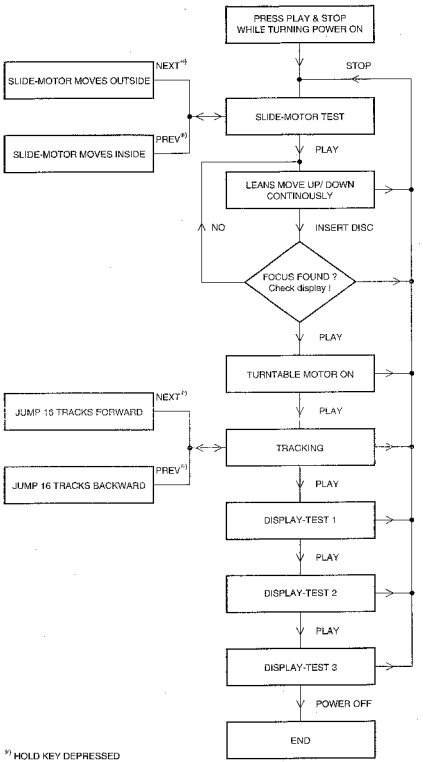
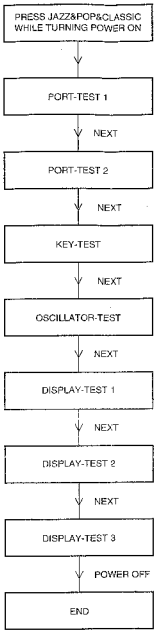
SERVICE TEST PROGRAM



*) HOLD KEY DEPRESSED

FACTORY TEST PROGRAM



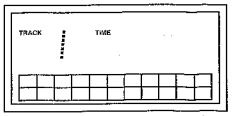


Fig. 1

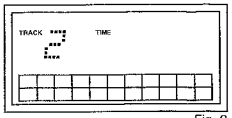


Fig. 2

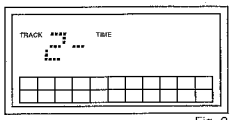


Fig. 3

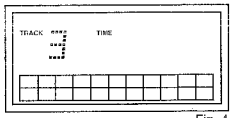


Fig. 4

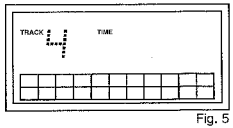


Fig. 5

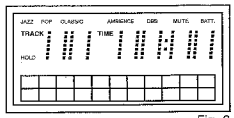


Fig. 6

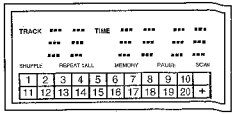


Fig. 7

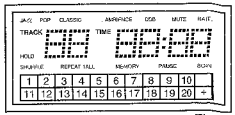


Fig. 8

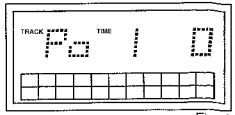


Fig. 9

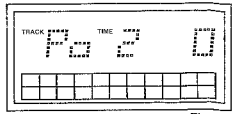


Fig. 10

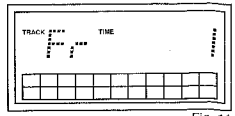


Fig. 11

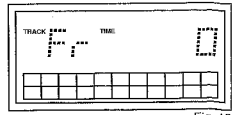


Fig. 12

ADJUSTMENT TABLE

CD-PART					
TRACKING OFFSET					
Service step 1		5 2	3812	Adjust to 0 V DC ±15mV	
TRACKING BALANCE					
Service step 3		8 2	3806		CHX = 0,5 V/DIV TB = 2 ms Adjust to 0 V DC
FOCUS GAIN					
Play with Test-Disc 5A	1500 Hz 2 Vrms	see Fig. 1	3814		CHX = 1 V/DIV CHY = 2 mV/DIV Adjust according to FIG.3
TRACKING GAIN					
Play with Test-Disc 5A	1200 Hz 1 Vrms	see Fig. 2	3808		CHX = 0,5 V/DIV CHY = 50 mV/DIV Adjust according to FIG.3

DC / DC CONVERTER					
+5V SUPPLY VOLTAGE					
Service step 1		13 14	3361	Adjust to 4,95 V DC ± 10 mV	

CHARGE-CIRCUIT					
CHARGE VOLTAGE					
Service step 1		15 16	3258	RL = 220 Ω Adjust to 4,6 V DC ± 50 mV	
		15 16	Check only	RL = 33 Ω Ucharge = 5V DC ± 100 mV	

FIG. 1

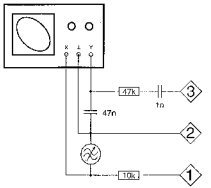


FIG. 2

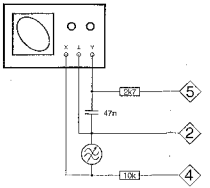
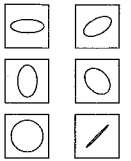


FIG. 3



CORRECT WRONG

ADJUSTMENT REMARKS

- General
A completely new adjustment of the cd-part is absolutely necessary if the optical pick-up unit (OPU) or semiconductors of the servo control circuits have been replaced.

- Focus gain / Tracking gain
To adjust the focus- and track-control circuit use the measure circuit according to fig. 1 resp. fig.2. Set the oscilloscope to X-deflection. The screen will show an ellipse.

- Track balance
Necessary to balance the different sensibilities of the track-diodes

- +5V adjustment
This adjustment is foreseen in a few sets only.

- Adjustment of charge-circuit
Use a 220 Ω resistor instead of the accu. Adjust Ucharge to 4,6 V ± 50 mV via R 3258. Exchange the 220 Ω resistor by a 33 Ω and measure Ucharge. The voltage **must not** exceed 5 V ± 100 mV. Otherwise the charge circuit doesn't work correct and has to be checked. CAUTION: If the measured voltage was not within the specification you **must not** reduce the voltage via R 3258 ! - If done the accu could overload and explode !

SERVICE - TOOLS

- Audio signal disc	4822 397 30184
- Disc without errors (test disc 5) + disc with drop outs, black spots and fingerprints (test disc 5A)	4822 397 30096
- 3" test disc	4822 397 30229
- Torx screwdriver set	4822 395 50145
- Service extension PCB *	4822 267 31332

* This service tool has been designed to allow measurements between the PCBs during play and is only useful together with the 3" test disc.

RC 5 - CODE

SYSTEM-CODES 20 AND 21 ARE RECOGNICED (CD AND COMBI)			
KEY	**COMMAND CODE**	**KEY**	**COMMAND CODE**
MUTE	13	FAST BACKWARD	50
VOLUME UP	16	FAST FORWARD	52
VOLUME DOWN	17	PLAY	53
SHUFFLE	28	STOP / CLEAR PROGRAM	54
REPEAT ALL	29	AMBIENCE	64
SKIP FORWARD	32	JAZZ	67
SKIP BACKWARD	33	POP	68
STORE	41	CLASSIC	69
INTRO SCAN	43	DBB	70
PAUSE	48	DEFEAT	72

ABBREVIAT

A-F
ACLFS*
ACLFS*
ADFCY
ADL
ADR
AFTL
AFTR
BCK
BNS

C*S R

CIGM
CI23
CI46
CMO
CS*
COM
CRCF
DASELI–4
DATA OUT

DCK
DM1 / DM2
D01
D02
DOBSEL
DOFK
DOTX
DRD
DSCK
EFFK
EFM
EMP
EST1
EST2

FG
FS OUT
FS+ / FS–
FSCK
FSR IN
GND
HF
HF OK
HFD*
HFD*

HOUT 2A/2B
HOUT 3A/3B
HOUT 4A/4B
IREF
JMP
JP1*, JP1*
LOCK/DRD
LPF
LRCK
MCK
MLA*
MR
MSD
NC
PWM1–2
RAD0–7
RAS*
RDB1–4
SBCP

FIG. 1

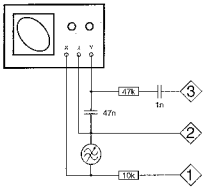


FIG. 2

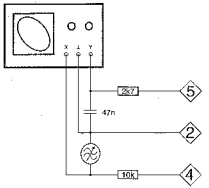
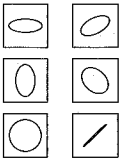


FIG. 3



CORRECT WRONG

ADJUSTMENT REMARKS

- General
A completely new adjustment of the cd-part is absolutely necessary if the optical pick-up unit (OPU) or semiconductors of the servo control circuits have been replaced.

- Focus gain / Tracking gain
To adjust the focus- and track-control circuit use the measure circuit according to fig. 1 resp. fig.2. Set the oscilloscope to X-deflection. The screen will show an ellipse.

- Track balance
Necessary to balance the different sensibilities of the track-diodes.

- +5V adjustment
This adjustment is foreseen in a few sets only.

- Adjustment of charge-circuit
Use a 220 Ω resistor instead of the accu. Adjust Ucharge to 4,6 V ± 50 mV via R 3258. Exchange the 220 Ω resistor by a 33 Ω and measure Ucharge. The voltage **must not** exceed 5 V ± 100 mV. Otherwise the charge circuit doesn't work correct and has to be checked. CAUTION: If the measured voltage was not within the specification you **must not** reduce the voltage via R 3258 ! - If done the accu could overload and explode !

SERVICE - TOOLS

- Audio signal disc	4822 397 30184
- Disc without errors (test disc 5) + disc with drop outs, black spots and fingerprints (test disc 5A)	4822 397 30096
- 3" test disc	4822 397 30229
- Torx screwdriver set	4822 395 50145
- Service extension PCB *	4822 267 31332

* This service tool has been designed to allow measurements between the PCBs during play and is only useful together with the 3" test disc.

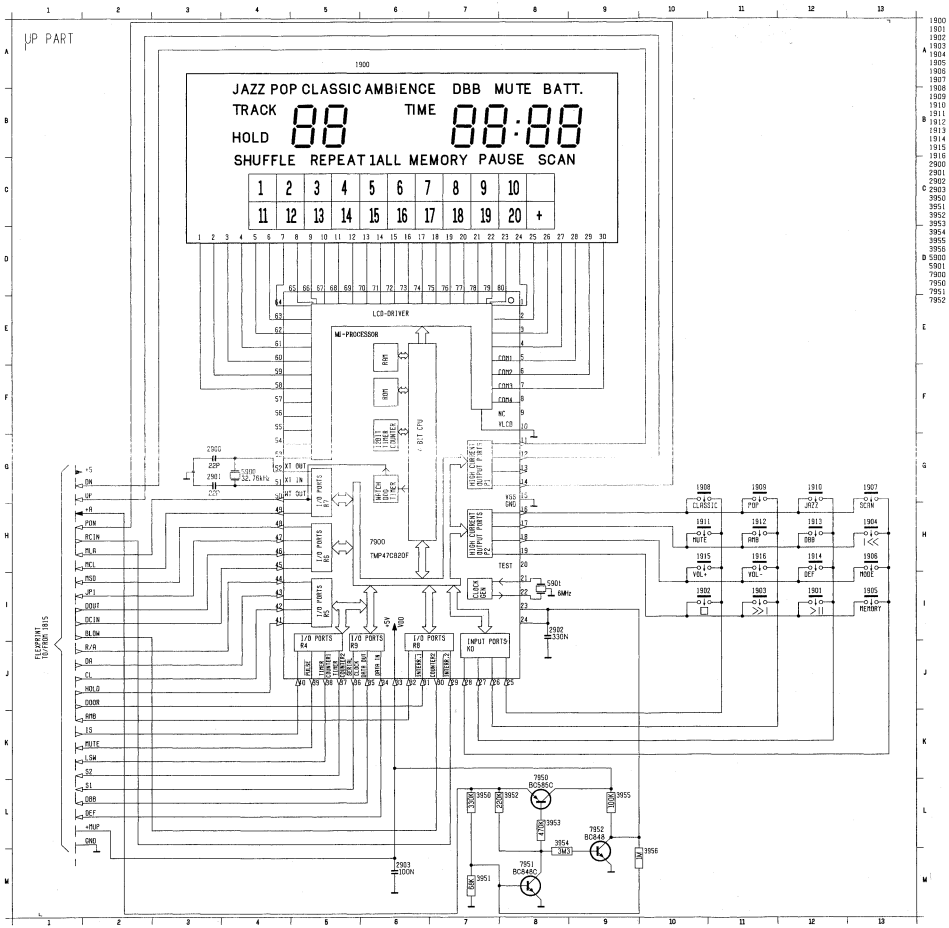
RC 5 - CODE

SYSTEM-CODES 20 AND 21 ARE RECOGNICED (CD AND COMBI)			
KEY	**COMMAND CODE**	**KEY**	**COMMAND CODE**
MUTE	13	FAST BACKWARD	50
VOLUME UP	16	FAST FORWARD	52
VOLUME DOWN	17	PLAY	53
SHUFFLE	28	STOP / CLEAR PROGRAM	54
REPEAT ALL	29	AMBIENCE	64
SKIP FORWARD	32	JAZZ	67
SKIP BACKWARD	33	POP	68
STORE	41	CLASSIC	69
INTRO SCAN	43	DBB	70
PAUSE	48	DEFEAT	72

ABBREVIATIONS

A – F	: Photodiode array outputs
ACLR*	: COM interface register clear input
ACLR*	: All clear input
ACRCY	: Clock accuracy input
AOL	: Analog output left channel
AOR	: Analog output right channel
APTL	: DAC sampling clock left channel
APTR	: DAC sampling clock right channel
BCK	: Bit clock input
BIAS	: Outputs reference voltage (VCC/2 at single supply voltage)
C FSR	: Connects the external capacitance for time constant of focus search
C16MI	: 1/2 divider input with internal feedback resistor
C423	: Clock output 4,2336MHz
C846	: Clock output 8,4672MHz
C8MO	: 1/2 divider output
CAS*	: Column addr. strobe signal output to RAM
COM	: Common
CRCF	: Subcode Q CRC check flag output
DASEL1–4	: Selection of DAC interface format
DATA OUT	: Inner condition output changed by command modes
DLRCK	: Left/right channel clock
DM1 / DM2	: Turntable motor driving outputs
DO1	: Dual DAC right channel serial data output
DO2	: Dual DAC left channel serial data output
DOBSEL	: Data bit select (16 bit = "H")
DOFK	: Frame clock output 7,35kHz (duty = 50%)
DOTX	: Output of digital interface
DRD	: Disc rotation down signal output
DSCK	: Data shift clock to DAC
EFFK	: EFM frame clock output (duty = 50%)
EFM	: Eight to fourteen modulation
EMP	: Emphasis flag output (Emphasis = "H")
EST1	: Error status1 (Error detected at C1–decoder)
EST2	: Error status2 (Error to be interpolated detected at C2–decoder)
FG	: Focus gain switch output
FS OUT	: Focus servo amplifier output
FS+ / FS–	: Focus servo amplifier positive / negative input
FSCK	: Clock output 44,1kHz (f_s)
FSR IN	: Focus search detector input
GND	: Ground 0V
HF	: High frequency signal input
HF OK	: HF OK signal input
HFD*	: High frequency signal detection
HFD*	: Outputs "H", when MR = "H" and tracking servo loop cuts off
HOUT 2A/2B	: Sledge motor driving PWM outputs
HOUT 3A/3B	: Track servo driving PWM outputs
HOUT 4A/4B	: Focus servo driving PWM outputs
IREF	: Current reference
JMP	: Outputs "H" under jump function
JP1*, JP1*	: 1 track jump control signal input (usually "H")
LOCK/DRD	: Lock status / Disc rotation down signal output
LPF	: PLL loop filter
LRCK	: Left/right channel clock to DAC or APTR clock
MCK	: COM interface shift clock input
MLA*	: COM interface data latch clock input
MR	: Mirror detected signal input
MSD	: COM interface serial data input
NC	: No conection
PWM1–2	: Turntable motor driving PWM outputs
RAD0–7	: Address output 0–7 to RAM
RAS*	: Row address strobe signal output to RAM
RDB1–4	: Data input/output 1–4 to RAM
SBCP	: Subcode P channel output, P – W channel serial data output
SBCQ	: Subcode Q channel output
SBCR	: Subcode R channel output
SBCS	: Subcode S channel output
SBCT	: Subcode T channel output
SBCU	: Subcode U channel output
SBCV	: Subcode V channel output
SBCW	: Subcode W channel output
SCCK	: Shift clock input for serial subcode data output
SCINT	: Interrupt output of subcode Q
SCOE1	: Enable input of subcode T–W channel output
SCOE2	: Enable input of subcode P–S channel output
SCOR	: Subcode sync. output
SHOCK	: Shock detector signal input
SQRCK	: Subcode Q register
SQRO	: Subcode Q register output
SS OUT	: Sledge servo amplifier output
SS+ / SS–	: Sledge servo amplifier positive / negative input
SYCLK	: Frame lock status output (Lock = "H")
TB	: Tracking balance input
TC IN	: Track cross signal input
TE IN	: Track error signal input
TE OUT	: Track error amplifier output
TE–	: Track error amplifier negative input
TEST1	: Test control input
TG1 / TG2	: Tracking gain switch 1/2 output
TLC	: Output from slice level control
TRHLD	: Direct control pin of TS1 switch
TS OUT	: Track servo amplifier output
TS+ / TS–	: Track servo amplifier positive / negative input
VCC	: Positive supply voltage
VDD	: positive power supply
VEE	: Negative supply voltage
VREF	: Reference voltage
VSS	: Ground 0V
WDCK	: Word clock to DAC or APTL clock
WE*	: Write enable output to RAM
WS	: Word select input
XI	: Crystal oscillator input with internal feedback resistor
XO	: Crystal oscillator output

* 1LOG. "0" ACTIVE !



CAD-REF ES AZ6808 P9 AZ6808 00 SH1 D02 (99-04-03)

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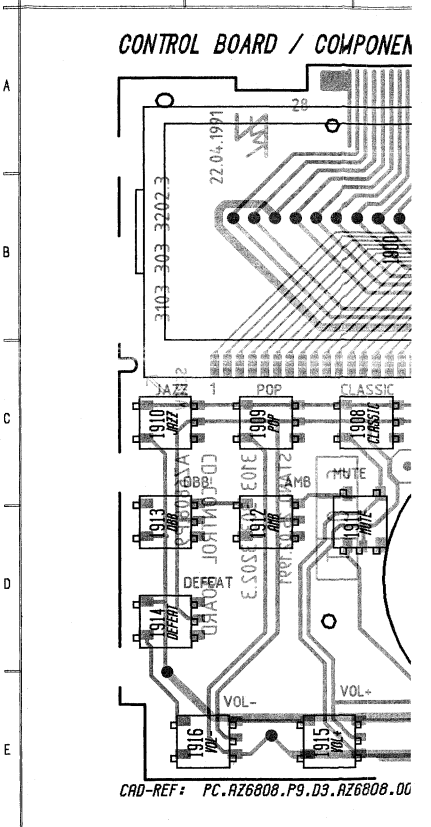
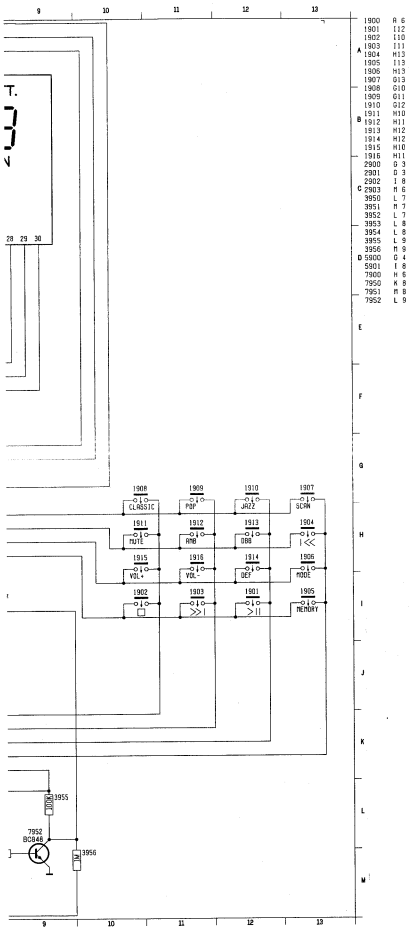
1901	E 5	1905	C 6	1909	C 2	1913	D
1902	D 5	1906	C 5	1910	C 1	1914	D
1903	D 6	1907	C 4	1911	D 2	1915	E





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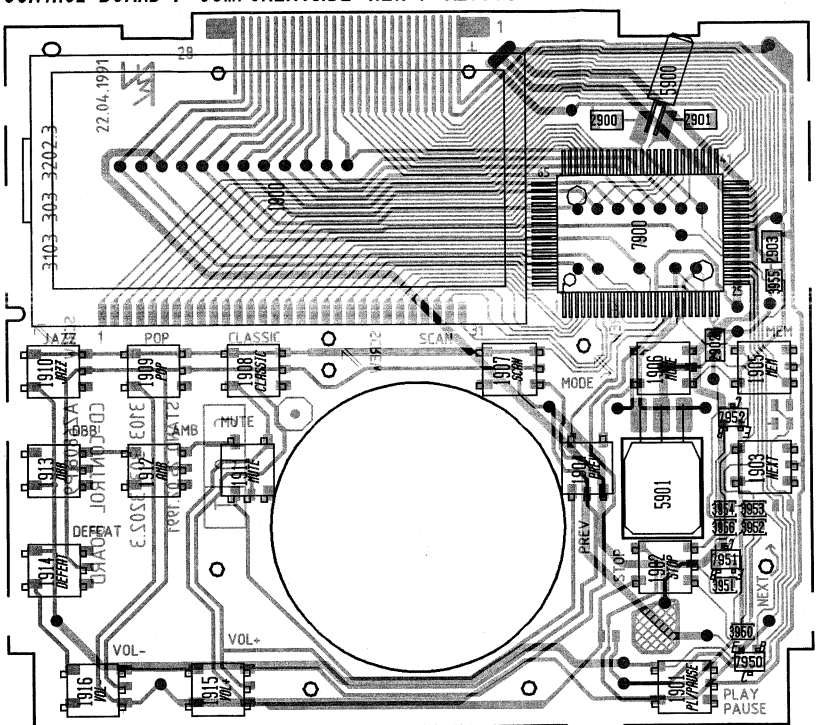
1901	E 5	1905	C 6	1909	C 2	1913	D 1	2900	B 5	3950	E 5	3954	D 5	5901	D 5	7952	C 5
1902	D 5	1906	C 5	1910	C 1	1914	D 1	2901	B 5	3951	D 5	3955	B 6	7900	B 5		
1903	D 6	1907	C 4	1911	D 2	1915	E 2	2902	C 5	3952	D 6	3956	D 5	7950	E 6		

CONTROL BOARD / COMPONENTSIDE VIEW / AZ6808



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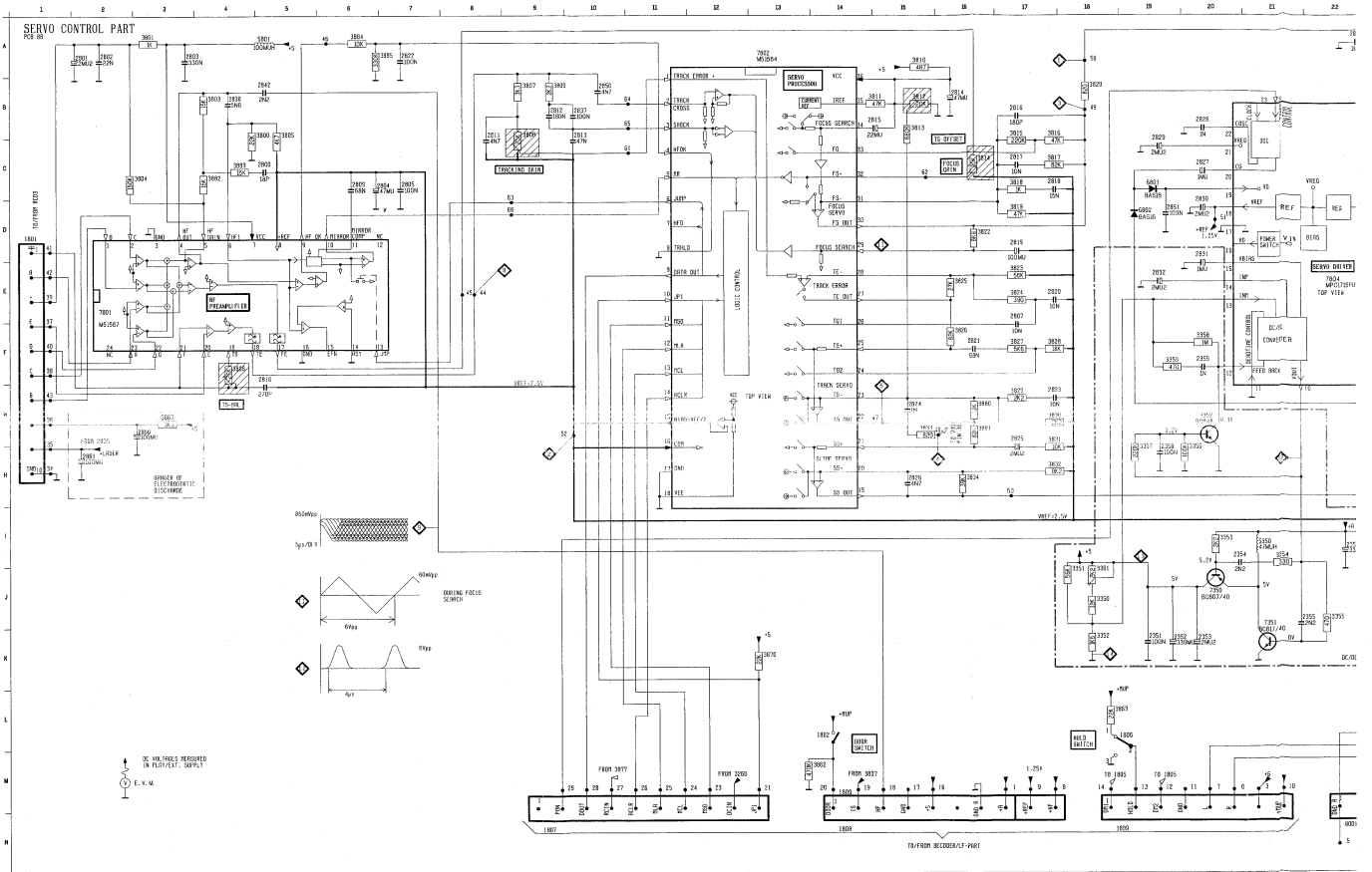
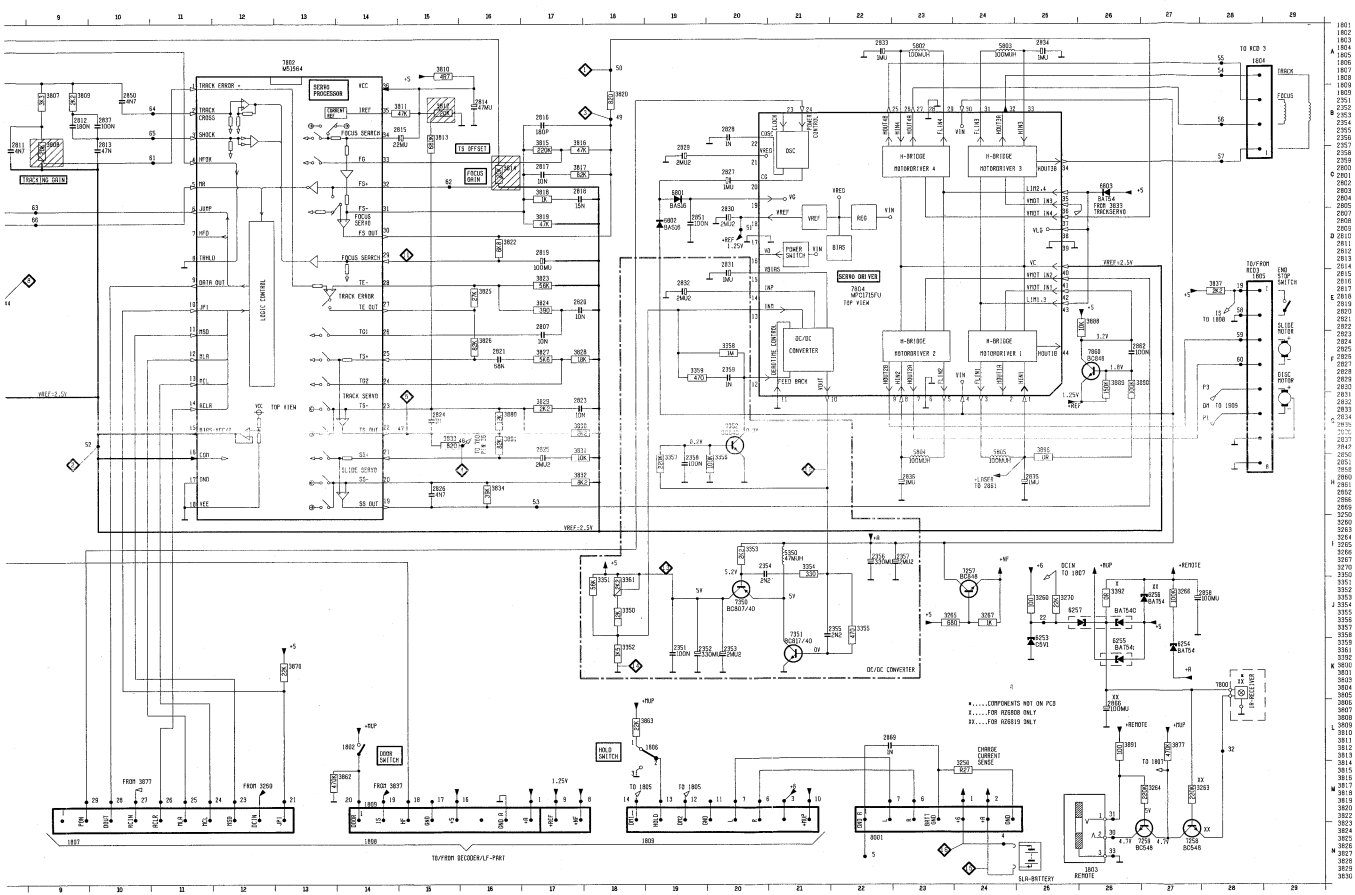
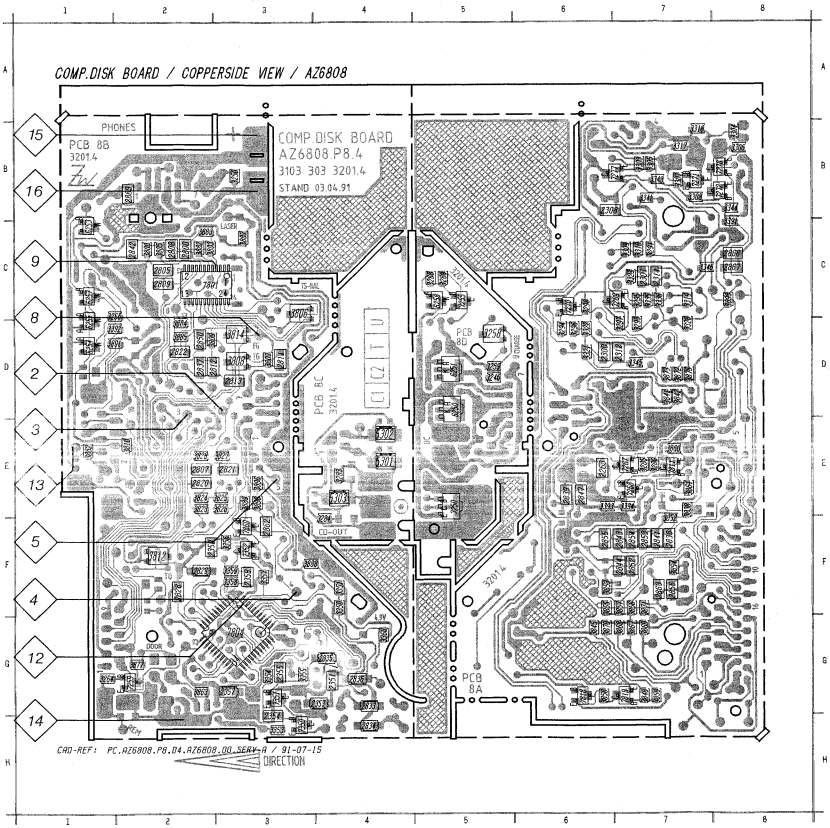

SERVO CONTROL PART
PCB 88
TO/FROM KEYB
RF PREAMPLIFIER
MIRROR
TRACKING SERN
TRACK ERROR
SERVO DRIVER
TOP VIEW
DC/DC CONVERTER
FEED BACK
FOCUS SERVO
TRACK SERVO
SLIDE SERVO
LOGIC CONTROL
IS OFFSET
HOLD SWITCH
DC VOLTAGES MEASURED IN PLOT/EXT. SUPPLY
E.V.M.
TO/FROM DECODER/LF-PART
CAD-REF ES AZ6808 P8 AZ6808 00 SHT 003 (91-04-16)





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2300	D 6	3304	B 8	3867	G 7
2301	C 7	3305	B 7	3868	G 7
2308	B 6	3306	B 8	3869	G 7
2311	C 7	3307	B 7	3871	F 7
2312	D 7	3308	B 7	3872	D 7
2351	G 4	3309	C 7	3873	D 7
2353	G 4	3310	C 7	3875	D 7
2354	H 3	3317	B 7	3877	G 2
2355	G 3	3318	B 7	3879	G 6
2357	G 3	3319	C 7	3882	C 2
2358	F 2	3320	D 7	3883	C 2
2359	F 3	3321	D 6	3884	D 2
2800	C 2	3322	D 6	3885	D 2
2805	C 2	3323	C 7	3887	C 3
2807	E 2	3335	C 7	3888	F 3
2808	C 2	3336	C 7	3889	E 3
2809	C 2	3341	B 7	3890	E 3
2811	D 3	3343	B 7	3891	D 2
2812	D 2	3344	B 8	3893	C 8
2813	D 3	3345	D 7	3896	E 3
2820	E 2	3346	C 7	5301	E 4
2821	E 3	3350	F 4	5302	E 4
2822	D 2	3351	F 4	5303	E 4
2828	F 2	3353	H 3	6250	D 5
2829	F 2	3354	G 3	6251	D 5
2833	G 4	3355	G 3	6253	C 1
2834	H 4	3356	F 3	6254	D 1
2835	G 4	3357	F 3	6255	D 1
2836	G 4	3358	F 3	6257	C 1
2837	D 2	3359	F 3	6258	C 5
2838	F 7	3360	G 4	7250	E 5
2839	E 6	3391	C 8	7255	C 5
2841	F 7	3392	D 2	7259	G 2
2842	C 2	3393	E 6	7267	E 7
2843	F 7	3394	E 7	7268	E 7
2844	F 7	3800	C 2	7269	E 7
2847	F 6	3803	C 2	7270	F 6
2850	D 2	3805	E 2	7271	B 7
2852	F 7	3806	C 3	7272	D 8
2853	F 7	3807	D 3	7277	H 7
2854	F 7	3808	D 3	7278	D 8
2855	F 8	3809	D 2	7350	H 3
2856	F 7	3810	E 2	7351	G 3
2862	F 3	3812	F 2	7352	F 3
2863	F 7	3814	D 3	7801	C 2
2867	C 8	3823	E 2	7804	G 3
2868	C 8	3824	E 2	7811	E 7
2869	B 2	3825	E 3	7818	G 6
3246	D 5	3826	E 3	7819	G 7
3250	B 3	3827	E 3	7860	F 3
3258	D 5	3828	E 2		
3259	D 5	3838	E 7		
3264	G 1	3841	D 7		
3265	C 2	3842	D 7		
3268	C 5	3845	G 6		
3269	C 5	3848	G 7		
3283	E 4	3852	F 7		
3284	F 4	3853	F 6		
3285	E 7	3854	F 7		
3286	E 7	3855	F 6		
3291	C 7	3856	F 7		
3293	D 7	3857	F 7		
3294	D 6	3858	G 6		
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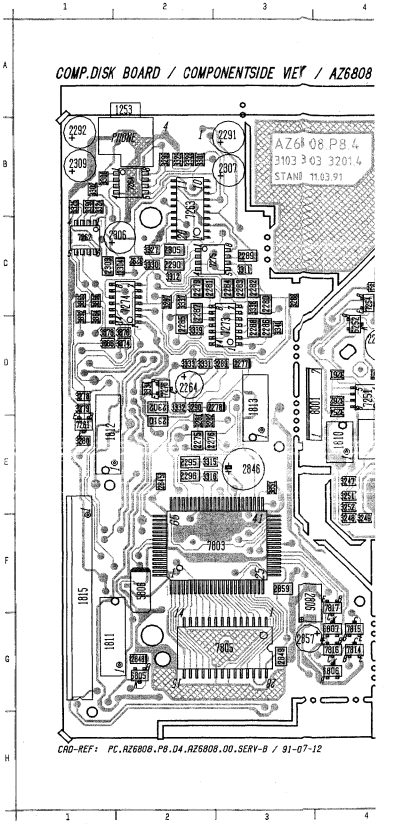

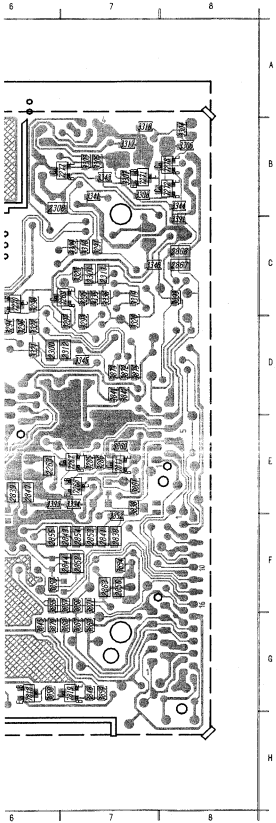

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2300	D 6	3304	B 8	3867	G 7	1252	E 4	2831	F 5	3817	E 7
2301	C 7	3305	B 7	3868	G 7	1253	A 2	2832	F 6	3818	E 7
2308	B 6	3306	B 8	3869	G 7	1801	D 6	2845	E 2	3819	E 7
A 2311	C 7	3307	B 7	3871	F 7	A 1802	G 7	2846	E 3	3820	F 7
2312	D 7	3308	B 7	3872	D 7	1803	H 7	2848	G 2	3822	F 7
2351	G 4	3309	C 7	3873	D 7	1804	G 5	2849	G 3	3829	F 6
2353	G 4	3310	C 7	3875	D 7	1805	F 5	2851	F 6	3830	F 6
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2808	C 2	3336	C 7	3889	E 3	1814	E 5	3251	E 4	3866	C 1
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2812	D 2	3344	B 8	3893	C 8	2251	C 4	3254	D 4	3876	D 2
2813	D 3	3345	D 7	3896	E 3	2264	D 2	3255	D 4	3878	D 1
C 2820	E 2	3346	C 7	5301	E 4	C 2275	E 2	3256	C 4	3880	E 6
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2834	H 4	3356	F 3	6254	D 1	2281	C 2	3267	F 7	5802	G 5
2835	G 4	3357	F 3	6255	D 1	2282	C 3	3270	C 8	5803	H 5
D 2836	G 4	3358	F 3	6257	C 1	D 2283	C 3	3276	D 1	5804	G 5
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2838	F 7	3360	G 4	7250	E 5	2285	D 2	3280	E 1	5806	F 2
2839	E 6	3391	C 8	7255	C 5	2286	D 3	3281	E 2	6252	D 4
2841	F 7	3392	D 2	7259	D 2	2287	C 2	3282	E 2	6801	F 7
2842	C 2	3393	E 6	7267	F 7	2288	D 3	3287	C 2	6802	G 7
2843	F 7	3394	C 2	7268	E 7	2289	C 3	3288	C 3	6803	G 7
2844	F 7	3800	C 2	7269	C 7	2290	C 2	3289	B 3	6805	G 2
2847	G 5	3802	C 2	7270	C 6	2291	H 3	3290	H 2	6806	G 4
E 2850	D 2	3805	C 2	7271	B 7	E 2292	B 1	3292	C 2	6807	G 4
2852	F 7	3806	C 3	7272	B 6	2293	C 2	3298	B 2	7251	D 4
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2854	F 7	3808	D 3	7278	A 8	2302	D 2	3301	B 2	7254	C 4
2855	F 6	3809	D 2	7350	H 3	2303	C 1	3302	B 1	7257	F 7
2856	F 7	3810	E 2	7351	G 3	2304	C 2	3311	C 3	7261	E 1
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2863	F 7	3814	D 3	7801	C 2	2306	C 2	3315	E 2	7263	B 2
F 2867	C 8	3823	E 2	7804	D 3	F 2307	B 3	3316	E 2	7264	B 2
2868	C 8	3824	E 2	7811	E 7	2309	B 1	3324	B 1	7273	D 3
2869	B 2	3825	E 3	7818	G 6	2310	E 2	3325	B 1	7274	C 2
3246	D 5	3826	E 3	7819	G 7	2352	G 6	3327	C 2	7275	C 2
3250	B 3	3827	E 3	7860	F 3	2356	G 6	3328	B 2	7276	D 2
3258	D 5	3828	E 2			2801	C 7	3329	B 2	7802	E 7
3259	D 5	3830	E 7			2802	C 7	3330	C 2	7803	F 3
3264	G 1	3841	D 7			2803	D 7	3331	D 2	7805	G 3
3265	C 2	3842	D 7			2804	D 7	3332	D 2	7814	G 4
G 3266	C 5	3845	G 6			G 2806	F 3	3333	D 2	7815	G 4
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3297	D 7	3861	E 7			2826	E 6	3813	F 6		
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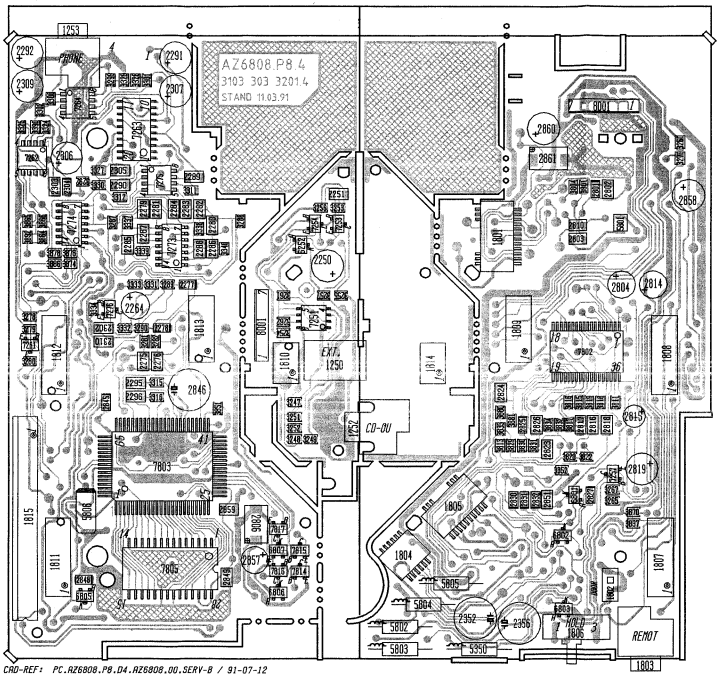
COMP.DISK BOARD / COMPONENTSIDE VIEW / AZ6808



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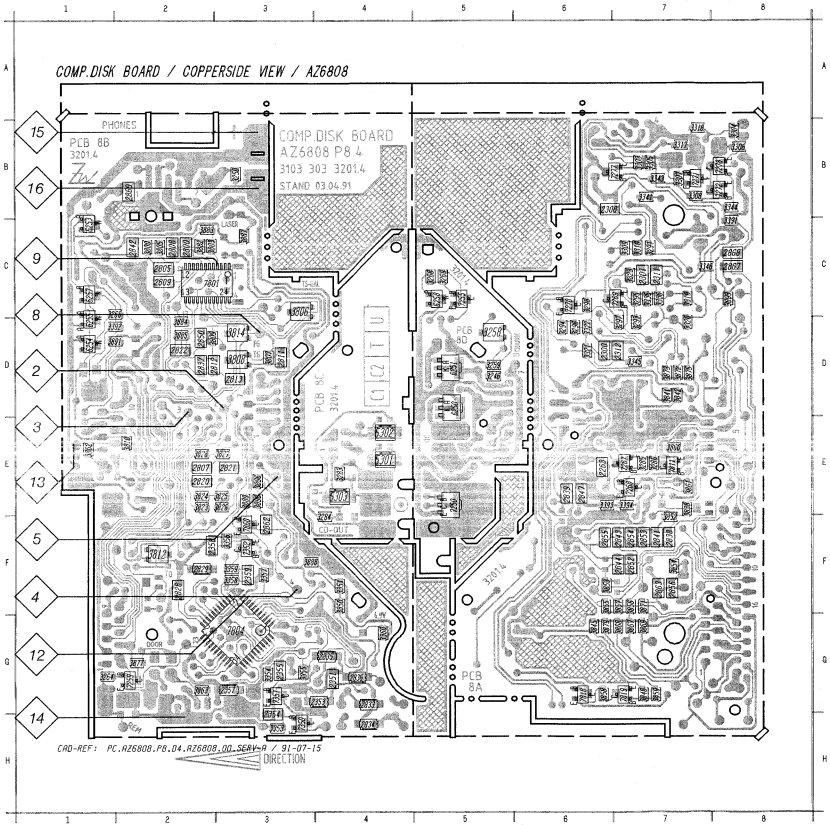

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2312	D	7	3308	B	7	3872	D	7
2351	G	4	3309	C	7	3873	D	7
2353	G	4	3310	C	7	3875	D	7
2354	H	3	3317	B	7	3877	G	2
2355	G	3	3318	B	7	3879	G	6
2357	G	3	3319	C	7	3882	C	2
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2807	E	2	3335	C	7	3888	F	3
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3265	C	2	3842	D	7			
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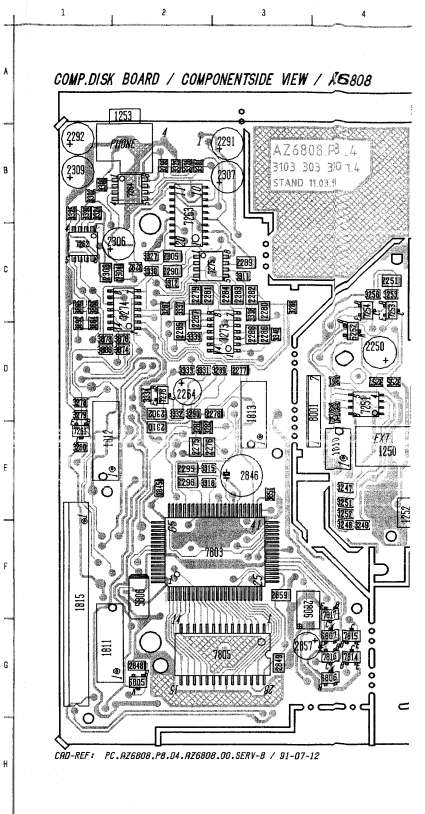

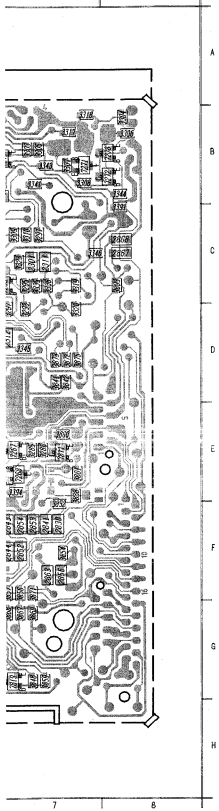

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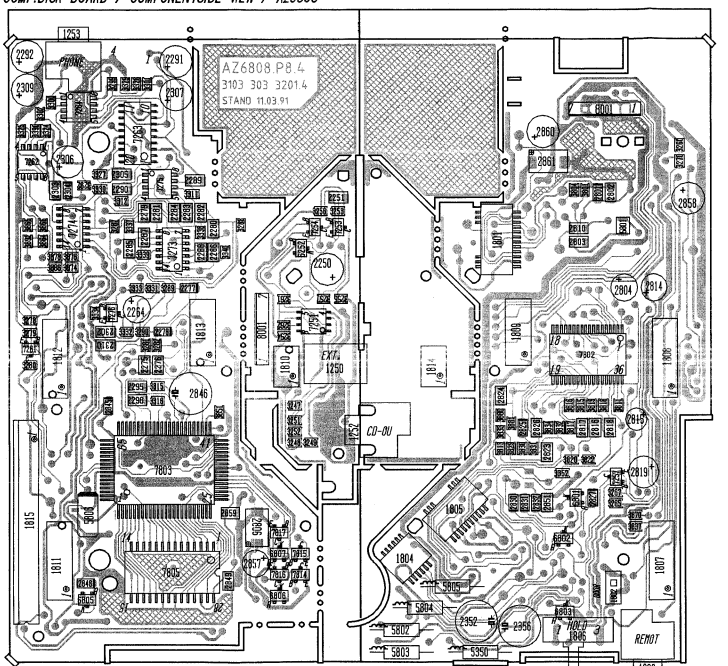
COMP.DISK BOARD / COMPONENTSIDE VIEW / AZ6808



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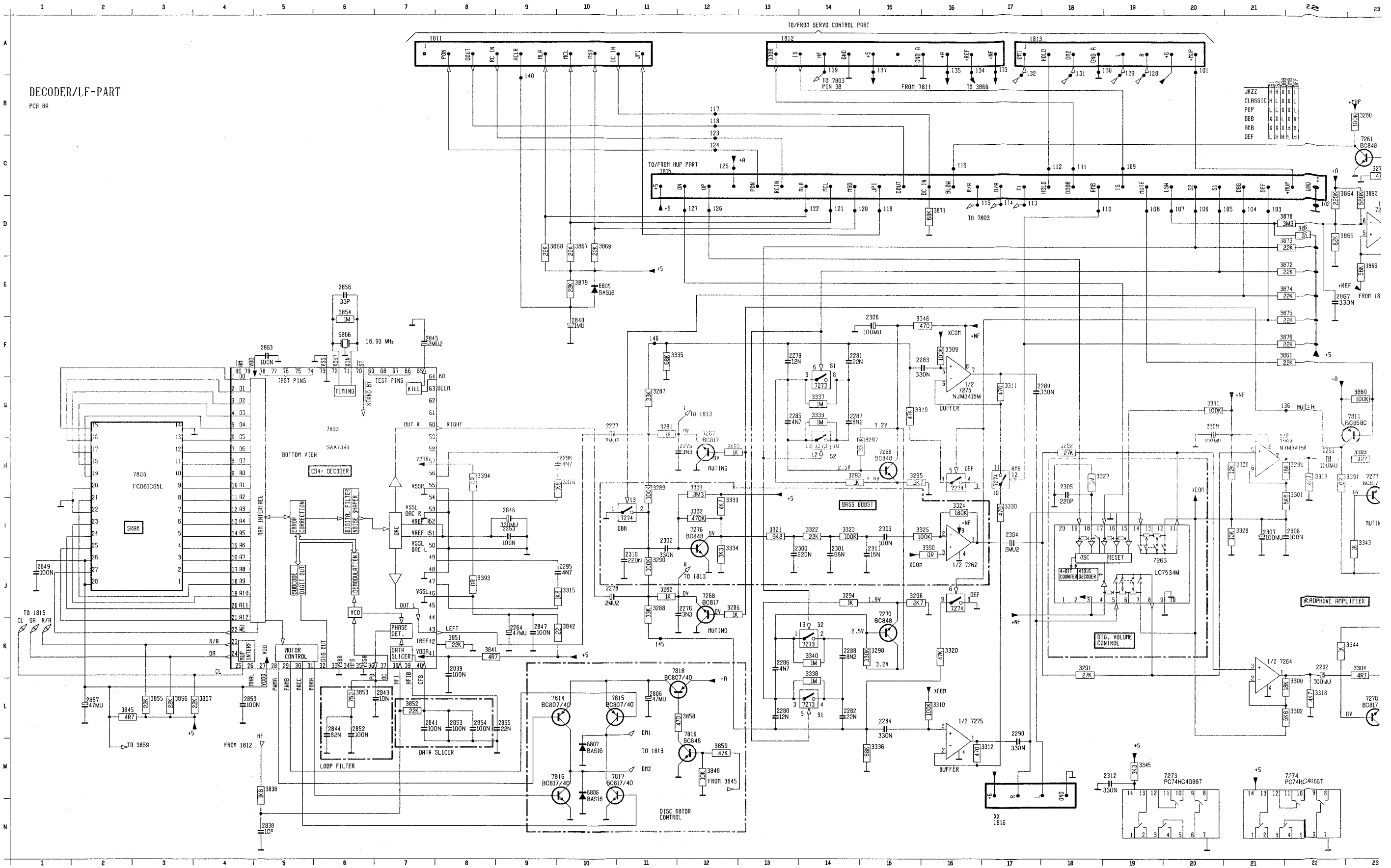
DECODER/LF-PART
PCB 8A
TO/FROM SERVO CONTROL PART
TO/FROM MUP PART
7805
FCB61C65L
SRAM
7803
SAA7341
BOTTOM VIEW
CD4+ DECODER
RAM INTERFACE
ERROR CORRECTION
DIGITAL FILTER NOISE SHAPER
SUBCODE DIGIT OUT
DEMODULATION
VCO
PHASE DET.
DATA SLICER
MOTOR CONTROL
MUP INTERF
TIMING
KILL
DAC
TEST PINS
STAND BY
LOOP FILTER
DATA SLICER
DISC MOTOR CONTROL
MUTING
BASS BOOST
BUFFER
DIG. VOLUME CONTROL
LC7534M
HEADPHONE AMPLIFIER
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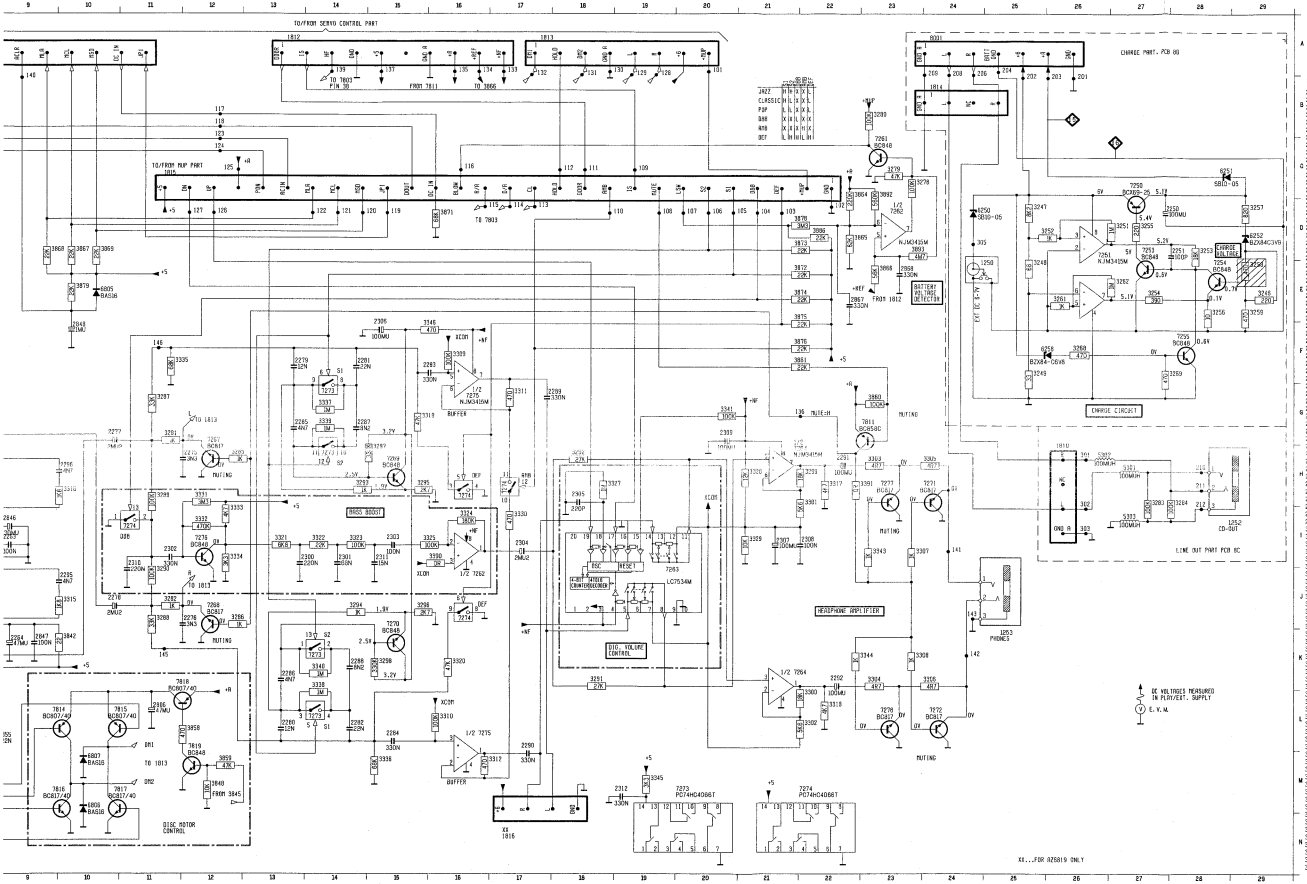
DBB
AMB
DEF



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1811	A 8	3311	G17		
1812	R13	3312	M16		
1813	M17	3315	J10		
1814	B24	3316	H10		
1815	C11	3317	H22		
1816	N07	3318	L22		
2250	D27	3319	G15		
2251	D27	3320	K16		
2253	I 9	3321	I13		
2254	K 9	3322	I14		
2275	M11	3323	I14		
2276	J11	3324	I16		
2277	G10	3325	L16		
2278	J10	3327	N18		
2279	F13	3328	H21		
2280	L13	3329	I21		
2281	F14	3330	L17		
2282	L14	3331	M12		
2283	F16	3332	I17		
2284	L15	3333	I12		
2285	G13	3334	I12		
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2305	H18	3394	H 8		
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2841	L 7	3956	L 3		
2843	L 6	3957	L 4		
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2847	K 9	3961	F22		
2848	J11	3964	C22		
2849	J11	3965	D22		
2852	K 9	3966	F24		
2853	L 9	3967	D10		
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3253	D26	5302	H20		
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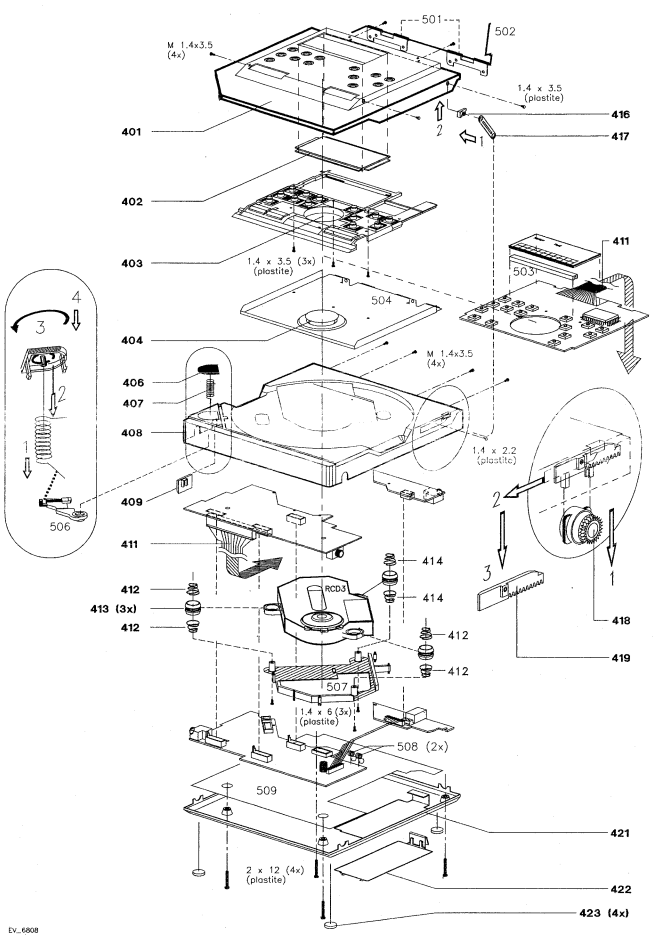
EXPLODED VIEW



MECHANICAL PARTS

	4822 600 70628	POUCH
	4822 691 30251	RCD3 DRIVE ASSY
401	4822 444 60746	CD-LID ASSY
402	12NC follows !	WINDOW
403	12NC follows !	BUTTON SET PRINTED
404	12NC follows !	DISC HOLD DOWN ASSY
406	4822 410 61286	BUTTON, PUSH
407	4822 492 70905	SPRING
408	4822 444 10158	CABINET
409	4822 411 61803	KNOB, SLIDE
411	12NC follows !	FLEXPRINT
412	4822 492 52254	SPRING, COMPRESS
413	4822 529 10271	DAMPER
414	4822 492 52253	SPRING, COMPRESS
416	12NC follows !	BEARING-STAND
417	12NC follows !	LEVER (DOOR)
418	4822 529 10272	DAMPER
419	4822 522 33078	ROD
421	4822 444 50652	BOTTOM ASSY
422	4822 444 60747	BATTERY LID ASSY
423	4822 462 41819	RUBBER FOOT
506	4822 402 61382	LEVER (EJECT)
508	4822 492 70906	SPRING, CONTACT
507	4822 464 50845	FRAME
	4822 502 13768	SCREW 1,4x2,2
	4822 502 13839	SCREW 1,4X6
	4822 502 30675	SCREW TORX 2X12 PL.
	4822 502 13769	SCREW (M1,4X4)

MECHANICAL PARTS

	4822 600 70628	POUCH
	4822 691 30251	RCD3 DRIVE ASSY
401	4822 444 60746	CD-LID ASSY
402	12NC follows !	WINDOW
403	12NC follows !	BUTTON SET PRINTED
404	12NC follows !	DISC HOLD DOWN ASSY
406	4822 410 61286	BUTTON, PUSH
407	4822 492 70905	SPRING
408	4822 444 10158	CABINET
409	4822 411 61803	KNOB, SLIDE
411	12NC follows !	FLEXPRINT
412	4822 492 52254	SPRING, COMPRESS
413	4822 529 10271	DAMPER
414	4822 492 52253	SPRING, COMPRESS
416	12NC follows !	BEARING-STAND
417	12NC follows !	LEVER (DOOR)
418	4822 529 10272	DAMPER
419	4822 522 33078	ROD
421	4822 444 50652	BOTTOM ASSY
422	4822 444 60747	BATTERY LID ASSY
423	4822 462 41819	RUBBER FOOT
506	4822 402 61382	LEVER (EJECT)
508	4822 492 70906	SPRING, CONTACT
507	4822 464 50845	FRAME
	4822 502 13768	SCREW 1,4x2,2
	4822 502 13839	SCREW 1,4X6
	4822 502 30675	SCREW TORX 2X12 PL.
	4822 502 13769	SCREW (M1.4X4)

MISCELLANEOUS

	4822 272 10291	SBC6608/00 AC/DC-AD.		1802	4822 277 11333	SWITCH, TUMBLER
	4822 015 20384	SBC3124/PH-HEADPHONE		1803	4822 267 31148	SOCKET, REMOTE CONT.
1250	4822 267 31354	SOCKET, EXT. SUPPLY		1806	4822 276 12891	SWITCH, PUSHBUTTON
1252	4822 267 31147	SOCKET, CD OUT		1814	5322 265 30736	SOCKET 4 POL.
1253	4822 267 40788	SOCKET, HEADPHONES				

DIODES

6250	4822 130 82588	SB10-05PCP	6258	5322 130 80406	BZX84-C6V8
6251	4822 130 82588	SB10-05PCP	6801	5322 130 31928	BAS16
6252	4822 130 81375	BZX84-C3V9	6802	5322 130 31928	BAS16
6253	5322 130 32835	BZX84-C5V1	6803	4822 130 80622	BAT54
6254	4822 130 80622	BAT54	6805	5322 130 31928	BAS16
6255	4822 130 82594	BAT54C	6806	5322 130 31928	BAS16
6257	4822 130 82594	BAT54C	6807	5322 130 31928	BAS16

TRANSISTORS

7250	4822 130 61919	BCX69-25	7277	4822 130 42133	BC817
7253	4822 130 61207	BC848	7278	4822 130 42133	BC817
7254	4822 130 61207	BC848	7350	5322 130 60123	BC807-40
7255	4822 130 61207	BC848	7351	4822 130 42615	BC817-40
7257	4822 130 61207	BC848	7352	4822 130 61207	BC848
7259	4822 130 61207	BC848	7811	5322 130 42012	BC858
7261	4822 130 61207	BC848	7814	5322 130 60123	BC807-40
7267	4822 130 42133	BC817	7815	5322 130 60123	BC807-40
7268	4822 130 42133	BC817	7816	4822 130 42615	BC817-40
7269	4822 130 61207	BC848	7817	4822 130 42615	BC817-40
7270	4822 130 61207	BC848	7818	5322 130 60123	BC807-40
7271	4822 130 42133	BC817	7819	4822 130 61207	BC848
7272	4822 130 42133	BC817	7860	4822 130 61207	BC848
7276	4822 130 61207	BC848			

INTEGRATED CIRCUITS

7251	4822 209 73157	NJM3415M	7275	4822 209 73157	NJM3415M
7262	4822 209 73157	NJM3415M	7801	4822 209 72814	M51567P
7263	4822 209 63924	LC7534M	7802	4822 209 72815	M51564P
7264	4822 209 73157	NJM3415M	7803	4822 209 30388	SAA7341GP
7273	5322 209 61482	PC74HC4066T	7804	4822 209 62261	MPC1715FU
7274	5322 209 61482	PC74HC4066T	7805	4822 209 63925	FCB61C65L-70T

COILS

5301	4822 157 62216	COIL 100µH	5802	4822 157 53123	100µH
5302	4822 157 62216	COIL 100µH	5803	4822 157 53123	100µH
5303	4822 157 62216	COIL 100µH	5804	4822 157 53123	100µH
5350	4822 157 63495	COIL 47µH	5805	4822 157 53123	100µH
5801	4822 157 62216	COIL 100µH	5806	4822 242 80257	RESONATOR 16,95MHz

CHIP RESISTORS

3246	4822 051 20221	220R	5%	0,1W	3259	4822 051 20471	470R	5%	0,1W
3247	4822 051 20822	8k2	5%	0,1W	3260	4822 051 20101	100R	5%	0,1W
3248	4822 051 20689	68R	5%	0,1W	3261	4822 051 10102	1k	2%	0,25W
3249	4822 051 20339	33R	5%	0,1W	3262	4822 051 20135	1M3	5%	0,1W
3250	4822 116 83324	0R27	10%	0,1W	3264	4822 051 20224	220k	5%	0,1W
3251	4822 051 20135	1M3	5%	0,1W	3265	4822 051 20681	680R	5%	0,1W
3252	4822 051 10102	1k	2%	0,25W	3266	4822 051 20104	100k	5%	0,1W
3253	4822 051 20183	18k	5%	0,1W	3267	4822 051 10102	1k	2%	0,25W
3254	4822 051 20391	390R	5%	0,1W	3268	4822 051 20471	470R	5%	0,1W
3255	4822 051 20221	220R	5%	0,1W	3269	4822 051 20471	470R	5%	0,1W
3256	4822 051 20109	10R	5%	0,1W	3270	4822 051 20223	22k	5%	0,1W
3257	4822 051 20821	820R	5%	0,1W	3278	4822 051 20104	100k	5%	0,1W
3258	4822 100 11734	470R TRIM POT SMD			3279	4822 051 20473	47k	5%	0,1W

CHIP RESISTORS

3280	4822 051 20104	100k	5%	0,1W
3281	4822 051 10102	1k	2%	0,25W
3282	4822 051 10102	1k	2%	0,25W
3283	4822 051 20104	100k	5%	0,1W
3284	4822 051 20104	100k	5%	0,1W
3285	4822 051 10102	1k	2%	0,25W
3286	4822 051 10102	1k	2%	0,25W
3287	4822 051 20333	33k	5%	0,1W
3288	4822 051 20333	33k	5%	0,1W
3289	4822 051 20104	100k	5%	0,1W
3290	4822 051 20104	100k	5%	0,1W
3291	4822 051 20273	27k	5%	0,1W
3292	4822 051 20273	27k	5%	0,1W
3293	4822 051 10102	1k	2%	0,25W
3294	4822 051 10102	1k	2%	0,25W
3295	4822 051 20272	2k7	5%	0,1W
3296	4822 051 20272	2k7	5%	0,1W
3297	4822 051 20334	330k	5%	0,1W
3298	4822 051 20334	330k	5%	0,1W
3299	4822 051 20183	18k	5%	0,1W
3300	4822 051 20183	18k	5%	0,1W
3301	4822 051 20562	5k6	5%	0,1W
3302	4822 051 20562	5k6	5%	0,1W
3303	4822 051 20478	4R7	5%	0,1W
3304	4822 051 20478	4R7	5%	0,1W
3305	4822 051 20478	4R7	5%	0,1W
3306	4822 051 20478	4R7	5%	0,1W
3307	4822 051 10102	1k	2%	0,25W
3308	4822 051 10102	1k	2%	0,25W
3309	4822 051 20104	100k	5%	0,1W
3310	4822 051 20104	100k	5%	0,1W
3311	4822 051 20471	470R	5%	0,1W
3312	4822 051 20471	470R	5%	0,1W
3315	4822 051 20182	1k8	5%	0,1W
3316	4822 051 20182	1k8	5%	0,1W
3317	4822 051 20472	4k7	5%	0,1W
3318	4822 051 20472	4k7	5%	0,1W
3319	4822 051 20473	47k	5%	0,1W
3320	4822 051 20473	47k	5%	0,1W
3321	4822 051 20682	6k8	5%	0,1W
3322	4822 051 20223	22k	5%	0,1W
3323	4822 051 20104	100k	5%	0,1W
3324	4822 051 20184	180k	5%	0,1W
3325	4822 051 20104	100k	5%	0,1W
3327	4822 051 20135	1M3	5%	0,1W
3328	4822 051 20123	12k	2%	0,1W
3329	4822 051 20103	10k	5%	0,1W
3330	4822 051 20471	470R	5%	0,1W
3331	4822 051 20335	3M3	5%	0,1W
3332	4822 051 20474	470k	5%	0,1W
3333	4822 051 20472	4k7	5%	0,1W
3334	4822 051 20332	3k3	5%	0,1W
3335	4822 051 20683	68k	5%	0,1W
3336	4822 051 20683	68k	5%	0,1W
3337	4822 051 20135	1M3	5%	0,1W
3338	4822 051 20135	1M3	5%	0,1W
3339	4822 051 20135	1M3	5%	0,1W
3340	4822 051 20135	1M3	5%	0,1W
3341	4822 051 20104	100k	5%	0,1W
3343	4822 051 10102	1k	2%	0,25W
3344	4822 051 10102	1k	2%	0,25W
3345	4822 051 20332	3k3	5%	0,1W
3346	4822 051 20471	470R	5%	0,1W
3350	4822 051 20823	82k	5%	0,1W
3351	4822 116 83226	12k	2%	0,1W
3352	4822 116 83225	1k5	2%	0,1W
3353	4822 051 20222	2k2	5%	0,1W
3354	4822 051 20331	330R	5%	0,1W
3355	4822 051 20471	470R	5%	0,1W
3356	4822 051 20104	100k	5%	0,1W
3357	4822 051 20224	220k	5%	0,1W
3358	4822 051 20135	1M3	5%	0,1W
3359	4822 051 20471	470R	5%	0,1W
3360	4822 051 20008	CHIP JUMPER		
3390	4822 051 20008	CHIP JUMPER		
3391	4822 051 20008	CHIP JUMPER		
3392	4822 051 20008	CHIP JUMPER		
3393	4822 051 20008	CHIP JUMPER		
3394	4822 051 20008	CHIP JUMPER		
3800	4822 051 20223	22k	5%	0,1W
3801	4822 051 10102	1k	2%	0,25W
3803	4822 051 20153	15k	5%	0,1W
3804	4822 051 20154	150k	5%	0,1W
3805	4822 051 20472	4k7	5%	0,1W
3806	4822 100 11733	20k TRIM POT SMD		
3807	4822 051 20332	3k3	5%	0,1W
3808	4822 100 11733	20k TRIM POT SMD		
3809	4822 051 20222	2k2	5%	0,1W
3810	4822 051 20478	4R7	5%	0,1W
3811	4822 051 20473	47k	5%	0,1W
3812	4822 100 11733	20k TRIM POT SMD		
3813	4822 051 20684	680k	5%	0,1W
3814	4822 100 11733	20k TRIM POT SMD		
3815	4822 051 20224	220k	5%	0,1W
3816	4822 051 20473	47k	5%	0,1W
3817	4822 051 20823	82k	5%	0,1W
3818	4822 051 20471	470R	5%	0,1W
3819	4822 051 20393	39k	5%	0,1W
3820	4822 051 20821	820R	5%	0,1W
3822	4822 051 20682	6k8	5%	0,1W
3823	4822 051 20563	56k	5%	0,1W
3824	4822 051 20391	390R	5%	0,1W
3825	4822 051 20273	27k	5%	0,1W
3826	4822 051 20823	82k	5%	0,1W
3827	4822 051 20562	5k6	5%	0,1W
3828	4822 051 20183	18k	5%	0,1W
3829	4822 051 20222	2k2	5%	0,1W
3830	4822 051 20222	2k2	5%	0,1W
3831	4822 051 20103	10k	5%	0,1W
3832	4822 051 20822	8k2	5%	0,1W
3833	4822 051 20821	820R	5%	0,1W
3834	4822 051 20393	39k	5%	0,1W
3837	4822 051 20222	2k2	5%	0,1W
3838	4822 051 20182	1k8	5%	0,1W
3841	4822 051 20478	4R7	5%	0,1W
3842	4822 051 20229	22R	5%	0,1W
3845	4822 051 20478	4R7	5%	0,1W
3848	4822 051 20103	10k	5%	0,1W
3851	4822 051 20223	22k	5%	0,1W
3852	4822 051 20223	22k	5%	0,1W

CHIP RESISTORS

3853	4822	051	20751	750R	5%	0,1W	3874	4822	051	20223	22k	5%	0,1W
3854	4822	051	20135	1M3	5%	0,1W	3875	4822	051	20223	22k	5%	0,1W
3855	4822	051	20223	22k	5%	0,1W	3876	4822	051	20223	22k	5%	0,1W
3856	4822	051	20223	22k	5%	0,1W	3877	4822	051	20474	470k	5%	0,1W
3857	4822	051	20223	22k	5%	0,1W	3878	4822	051	20335	3M3	5%	0,1W
3858	4822	051	20471	470R	5%	0,1W	3879	4822	051	20223	22k	5%	0,1W
3859	4822	051	20473	47k	5%	0,1W	3880	4822	051	20123	12k	2%	0,1W
3860	4822	051	20104	100k	5%	0,1W	3881	4822	051	20823	82k	5%	0,1W
3861	4822	051	20223	22k	5%	0,1W	3882	4822	051	20153	15k	5%	0,1W
3862	4822	051	20474	470k	5%	0,1W	3883	4822	051	20153	15k	5%	0,1W
3863	4822	051	20223	22k	5%	0,1W	3884	4822	051	20103	10k	5%	0,1W
3864	4822	116	83323	220k	2%		3885	4822	051	20334	330k	5%	0,1W
3865	4822	116	83322	120k	2%		3886	4822	051	20223	22k	5%	0,1W
3866	4822	051	20563	56k	5%	0,1W	3887	4822	051	20332	3k3	5%	0,1W
3867	4822	051	20223	22k	5%	0,1W	3888	4822	051	20103	10k	5%	0,1W
3868	4822	051	20223	22k	5%	0,1W	3889	4822	051	20154	150k	5%	0,1W
3869	4822	051	20223	22k	5%	0,1W	3890	4822	051	20104	100k	5%	0,1W
3870	4822	051	20223	22k	5%	0,1W	3891	4822	051	20101	100R	5%	0,1W
3871	4822	051	20683	68k	5%	0,1W	3892	4822	051	20564	560k	5%	0,1W
3872	4822	051	20223	22k	5%	0,1W	3893	4822	051	20475	4M7	5%	0,1W
3873	4822	051	20223	22k	5%	0,1W	3896	4822	051	20008	CHIP JUMPER		

CAPACITORS

2250	4822	124	42241	100µF	20%	6,3V	2356	4822	124	42242	330µF	20%	6,3V
2264	4822	124	42256	47µF		6,3V	2359	4822	122	31746	1nF	5%	50V
2275	5322	122	33446	3,3nF	10%	63V	2803	4822	122	33064	330nF	20%	25V
2276	5322	122	33446	3,3nF	10%	63V	2804	4822	124	42256	47µF		6,3V
2283	4822	122	33064	330nF	20%	25V	2805	4822	124	42257	47µF	20%	6,3V
2284	4822	122	33064	330nF	20%	25V	2814	4822	124	42256	47µF		6,3V
2289	4822	122	33064	330nF	20%	25V	2815	4822	124	42255	22µF	20%	6,3V
2290	4822	122	33064	330nF	20%	25V	2819	4822	124	42241	100µF	20%	6,3V
2291	4822	124	42241	100µF	20%	6,3V	2828	4822	122	31746	1nF	5%	50V
2292	4822	124	42241	100µF	20%	6,3V	2846	4822	124	42242	330µF	20%	6,3V
2302	4822	122	33064	330nF	20%	25V	2856	4822	122	32444	33pF	5%	50V
2306	4822	124	42241	100µF	20%	6,3V	2857	4822	124	42256	47µF		6,3V
2307	4822	124	42241	100µF	20%	6,3V	2858	4822	124	42241	100µF	20%	6,3V
2309	4822	124	42241	100µF	20%	6,3V	2860	4822	124	42241	100µF	20%	6,3V
2312	4822	122	33064	330nF	20%	25V	2867	4822	122	33064	330nF	20%	25V
2352	4822	124	42242	330µF	20%	6,3V	2868	4822	122	33064	330nF	20%	25V

CHIP CAPACITORS

2251	4822	122	31765	100pF	5%	50V	2305	4822	122	31965	220pF	5%	
2263	4822	122	33496	100nF	10%	63V	2308	4822	122	33496	100nF	10%	63V
2277	4822	124	10965	2,2µF	20%	6,3V	2310	4822	122	32927	220nF	10%	63V
2278	4822	124	10965	2,2µF	20%	6,3V	2311	4822	122	31782	15nF	10%	50V
2279	5322	122	31648	12nF	10%	50V	2351	4822	122	33496	100nF	10%	63V
2280	5322	122	31648	12nF	10%	50V	2353	4822	124	10965	2,2µF	20%	6,3V
2281	4822	122	31797	22nF	10%	63V	2354	4822	122	31644	2,2nF	10%	63V
2282	4822	122	31797	22nF	10%	63V	2355	4822	122	31644	2,2nF	10%	63V
2285	4822	122	31784	4,7nF	10%	50V	2357	4822	124	10965	2,2µF	20%	6,3V
2286	4822	122	31784	4,7nF	10%	50V	2358	4822	122	33496	100nF	10%	63V
2287	4822	122	32856	8,2nF	10%	63V	2800	4822	122	31769	18pF	5%	50V
2288	4822	122	32856	8,2nF	10%	63V	2801	4822	124	10965	2,2µF	20%	6,3V
2295	4822	122	31784	4,7nF	10%	50V	2802	4822	122	31797	22nF	10%	63V
2296	4822	122	31784	4,7nF	10%	50V	2805	4822	122	33496	100nF	10%	63V
2300	4822	122	32927	220nF	10%	63V	2807	4822	122	32442	10nF	10%	50V
2301	4822	122	32891	68nF	10%	63V	2808	4822	122	31916	5,6nF	10%	63V
2303	4822	122	33496	100nF	10%	63V	2809	4822	122	32891	68nF	10%	63V
2304	4822	124	10965	2,2µF	20%	6,3V	2810	4822	122	32142	270pF	5%	63V

CHIP CAPACITORS

2811	4822 122 31784	4,7nF	10%	50V	2837	4822 122 33496	100nF	10%	63V
2812	4822 126 11499	180nF	20%	50V	2838	4822 122 31971	10pF	10%	50V
2813	4822 122 32542	47nF	10%	63V	2839	4822 122 33496	100nF	10%	63V
2816	4822 122 31768	180pF	5%	50V	2841	4822 122 33496	100nF	10%	63V
2817	4822 122 32442	10nF	10%	50V	2842	4822 122 31644	2,2nF	10%	63V
2818	4822 122 32597	6,8nF	10%	63V	2843	4822 122 32442	10nF	10%	50V
2820	4822 122 32442	10nF	10%	50V	2844	5322 122 32838	82nF	10%	63V
2821	4822 122 32891	68nF	10%	63V	2845	4822 124 10965	2,2µF	20%	6,3V
2822	4822 122 33496	100nF	10%	63V	2847	4822 122 33496	100nF	10%	63V
2823	4822 122 32442	10nF	10%	50V	2848	5322 124 10798	1µF	20%	16V
2824	5322 122 31647	1nF	10%	63V	2849	4822 122 33496	100nF	10%	63V
2825	4822 124 10965	2,2µF	20%	6,3V	2850	4822 122 31784	4,7nF	10%	50V
2826	4822 122 31784	4,7nF	10%	50V	2851	4822 122 33496	100nF	10%	63V
2827	5322 124 10798	1µF	20%	16V	2852	4822 122 33496	100nF	10%	63V
2829	4822 124 10965	2,2µF	20%	6,3V	2853	4822 122 33496	100nF	10%	63V
2830	4822 124 10965	2,2µF	20%	6,3V	2854	4822 122 33496	100nF	10%	63V
2831	5322 124 10798	1µF	20%	16V	2855	4822 122 31797	22nF	10%	63V
2832	4822 124 10965	2,2µF	20%	6,3V	2859	4822 122 33496	100nF	10%	63V
2833	5322 124 10798	1µF	20%	16V	2861	4822 124 41897	100µF	20%	4V
2834	5322 124 10798	1µF	20%	16V	2862	4822 122 33496	100nF	10%	63V
2835	5322 124 10798	1µF	20%	16V	2863	4822 122 33496	100nF	10%	63V
2836	5322 124 10798	1µF	20%	16V	2869	5322 122 31647	1nF	10%	63V